

# **Kennedy NASA Procedural Requirements**

**Effective Date:**        **October 2, 2020**

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**Responsible Office:** **Spaceport Integration and Services**

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## **Kennedy Space Center Occupational Medicine Program**

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**National Aeronautics and  
Space Administration**

**John F. Kennedy Space Center**

### Change Log

Date	Revision	Description
8/8/13	A	<p>Preface: Section P.5 Measurement/Verification added Section P.4 Applicable Documents and Forms; "Americans with Disabilities Act Accessibility Guidelines" added</p> <p>Chapter 1 KSC Civil Service Workers' Compensation Program Editorial changes only</p> <p>Chapter 2 KSC Skin Cancer Prevention Program Editorial and administrative changes only (e.g., Shuttle related jobs removed from list of pertinent jobs)</p> <p>Chapter 3 KSC Automated External Defibrillator Program Editorial changes made Changes made to bring the Kennedy National Aeronautics and Space Administration (NASA) Procedural Requirements (KNPR) into compliance with NASA Procedural Requirements (NPR) 1800.1C, NASA Occupational Health Program Procedures as follows:</p> <ol style="list-style-type: none"> <li>1. Section on placement of Automated External Defibrillators (AED)s added to address the NPR requirement for having an AED placement plan.</li> <li>2. Section on Periodic Drills added to address NPR requirement for drills.</li> <li>3. Section added on AED Wall Cabinets complying with the Americans with Disabilities Act per the NPR.</li> </ol> <p>Chapter 4 KSC Bloodborne Pathogen Program Editorial changes. Changes made to bring the KNPR into compliance with NPR 1800.1C, NASA Occupational Health Program Procedures as follows:</p> <ol style="list-style-type: none"> <li>1. A section on "Examples of job classifications at KSC covered under an exposure control program" added to the document to comply with requirement of the NPR.</li> </ol>
8/10/15	B	<p>Change directorate name from Center Operations to Spaceport Integration and Services</p> <p>Clarified Section P.1, Purpose and P.3 Authority.</p> <p>Section P.4, Documents were removed that were not referenced in the KNPR.</p> <p>Chapter 1, Civil Service Workers' Compensation Program was eliminated from the document. The program has been transferred from KSC to the NASA Shared Services Center.</p>

		<p>Chapters 2-4 were renumbered to reflect the elimination of Chapter 1.</p> <p>Chapter 2, Automated External Defibrillator Program, reordered sections. Minor changes in Section 2.7 to reflect the diversity of locations where AED wall cabinets are installed. Many locations are not amenable to being mounted per the American Disability Act Guidelines. In addition, changed to ensure any movement of the AED was coordinated with the AED Program Director (the KSC Sanitation and Public Health Officer) and to ensure access to the AED by responders was not hampered by locks or other means.</p>
7/31/2020	B-1	<p>The KNPR expires August 10, 2020. Due to COVID-19, the medical group has been extremely occupied dealing with COVID tracing and that is taking up a significant amount of their time. A 3-month extension has been granted.</p>
10/2/2020	C	<p>The requirements and responsibilities were revalidated as written with administrative changes to content and structure to comply with NPR 1400.1, NASA Directives and Charters Procedural Requirements</p>

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## **PREFACE**

### **P.1 PURPOSE**

This Kennedy National Aeronautics and Space Administration (NASA) Procedural Requirements (KNPR) document contains the requirements for implementing the following Occupational Medicine Programs: Kennedy Space Center (KSC) Skin Cancer Prevention Program, the KSC Automated External Defibrillator (AED) Program, and the KSC Bloodborne Pathogen Program, which are required by NASA Procedural Requirements (NPR) 1800.1, NASA Occupational Health Program Procedures, to have a specific documented program or written policy. This KNPR does not in any way relieve various NASA organizations and their associated contractors of responsibility for the protection of personnel under their cognizance.

### **P.2 APPLICABILITY**

- a. This KNPR applies to all NASA organizational elements located at KSC, Cape Canaveral Air Force Station, and NASA KSC facilities and operations at other locations. This includes associated contractors, to the extent specified in their respective contracts, KSC tenant organizations, and other Government agencies, their contractors, and tenants.
- b. In this directive, all mandatory actions (i.e., requirements) are denoted by statements containing the term “shall.” The terms “may” or “can” denote discretionary privilege or permission, “should” denotes a good practice and is recommended, but not required, “will” denotes expected outcome, and “are/is” denotes descriptive material.
- c. In this directive, all document citations are assumed to be the latest version unless otherwise noted.

### **P.3 AUTHORITY**

- a. [NASA Policy Directive 1800.2, NASA Occupational Health Program](#)
- b. [NPR 1800.1, NASA Occupational Health Program Procedures](#)
- c. [Kennedy NASA Policy Directive 1810.1, KSC Occupational Medicine Program](#)

### **P.4 APPLICABLE DOCUMENTS AND FORMS**

[Code of Federal Regulations \(CFR\) 29 Part 1910.1030, Occupational Exposure to Bloodborne Pathogens](#)

### **P.5 MEASUREMENT/VERIFICATION**

Triennial audit of the KSC Occupational Health Program by the NASA Headquarters Office of the Chief Health and Medical Officer and interim KSC self-audits.

## **P.6 CANCELLATION**

This revision cancels KNPR 1810.2, Rev. B-1, KSC Occupational Medicine Program

*/digitally signed by Ms. Bray 10-2-2020/*

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## **CHAPTER 1 SKIN CANCER PREVENTION PROGRAM**

### **1.1 Introduction**

The KSC Skin Cancer Prevention Program is designed to reduce employee risk for sun exposure related medical conditions such as skin cancer and cataracts via administrative measures, personal protective equipment (PPE), and education.

### **1.2 Objectives**

Minimize the incidence of skin cancer and other sun exposure related medical conditions.

### **1.3 Implementation**

#### **1.3.1 Administrative Measures**

a. Administrative measures to potentially reduce intense sun or ultraviolet (UV) exposure include identification of high-risk exposure occupations and development of a mechanism to minimize employee exposure.

b. Examples of high sun and UV exposure occupations include, but are not limited to:

- (1) Roofing crew.
- (2) Road crew (painters and maintenance workers).
- (3) Roads and grounds personnel.
- (4) Security officers.
- (5) Welders (additional non-solar UV exposure).
- (6) Construction personnel, including those performing construction job surveillance or monitoring.
- (7) Personnel that work on ships or boats.
- (8) General maintenance workers.
- (9) Painters.
- (10) Pad mechanics.
- (11) High voltage crews.
- (12) Water and waste personnel.
- (13) Environmental health specialists.

- (14) Propellant mechanics.
- (15) Contamination control UV light users.
- (16) Other workers with significant sun or artificially produced UV exposure as a part of their official duties.

c. Examples of mechanisms to reduce UV exposure include:

- (1) Limit outside work activities during peak midday solar exposure (10:00 a.m. to 2:00 p.m. standard time, 11:00 a.m. to 3:00 p.m. daylight savings time).
- (2) Educate supervisors and employees in the use of appropriate PPE (e.g., brimmed hats, long sleeve shirts, long trousers, sunscreen, and sunglasses) and add these requirements to job procedures.
- (3) Encourage voluntary outdoor activities (e.g., running) during non-peak sun exposure hours.

d. Responsibilities:

- (1) Each NASA and on-site contractor organization shall:
  - i. Develop administrative measures and promote healthful UV exposure practices for individuals within their organization.
  - ii. Identify occupations within their organization at risk for high sun or high UV exposure in performance of their duties.
  - iii. Identify activities that can be limited during peak midday solar exposure (10:00 a.m. to 2:00 p.m. standard time, 11:00 a.m. to 3:00 p.m. daylight savings time).

### 1.3.2 PPE

a. Appropriate PPE includes:

- (1) UV cards to quantify exposure.
- (2) Wide brimmed hats.
- (3) Sunscreen.
- (4) Tarps, umbrellas, and other sun shields as appropriate.
- (5) Clothing such as long-sleeve coveralls.
- (6) UV protection sunglasses for outside workers (cataract prevention).

b. Responsibilities:



(1) Each NASA and on-site contractor organization shall procure appropriate PPE for their employees identified as at risk for high sun or high UV exposure in performance of their duties.

(2) The KSC Exchange and the KSC Visitor Complex shall assure hats and sunscreen are available for sale to employees, visitors, and guests during daytime launches and landings.

### 1.3.3 Educational Measures

a. Educational measures and materials shall include:

(1) Health education and wellness program instructional pamphlets, posters, and signs about skin cancer, skin cancer recognition, skin cancer prevention, and skin cancer protection.

(2) Emphasis on continuing medical education for physicians in skin cancer surveillance.

(3) Physician-to-patient education during occupational health physical examination visits.

(4) Educational material for the workforce on total body skin self-examination.

b. Responsibilities:

(1) The KSC occupational health contractor Health Education and Wellness Program shall procure and distribute educational materials.

(2) The KSC occupational health contractor physicians shall educate their patients who receive occupational physicals on the importance of sun and UV protection as well as skin cancer surveillance and self-examination.

### 1.3.4 Skin Cancer Surveillance

a. Skin cancer surveillance shall include:

(1) Encouragement of workforce to perform monthly total body skin self-examination.

(2) Referral to dermatologist or skin cancer specialist for those with suspicious lesions or those at high risk for skin cancer development.

(3) High risk individuals include:

i. Persons with family history of skin cancer.

ii. Persons with a history of skin cancer.

iii. Persons with atypical moles.

iv. Persons with numerous moles (i.e., greater than 50).

- v. Fair- or light-skinned individuals.
- vi. Persons with a history of intense sun exposure.
- b. Responsibilities:
  - (1) The KSC occupational health contractor Health Education and Wellness Program shall procure and distribute educational materials concerning total body skin self-examination.
  - (2) The KSC occupational health contractor physicians shall refer individuals with suspicious skin lesions, or who are at high risk, to a dermatologist or skin cancer specialist.

## **CHAPTER 2 AUTOMATED EXTERNAL DEFIBRILLATOR PROGRAM**

### **2.1 Introduction**

With the development of AEDs, early recognition and correction of cardiac arrhythmias by lay rescuers can significantly improve the outcome of cardiac arrest.

### **2.2 Purpose**

2.2.1 Any organization can procure and deploy an AED at KSC. This document establishes policy concerning the management of any AED deployed at KSC.

2.2.2 Activating emergency medical services prior to AED use is vitally important in an emergency incident; in case of an emergency, dial "911" from a KSC phone or 321-867-7911 from a cell phone.

### **2.3 Responsibilities**

2.3.1 The Chief, Aerospace Medicine and Occupational Health Branch, or delegate, is designated the AED Program Director (PD) and shall:

- a. Develop policy regarding the overall AED Program at KSC.
- b. Conduct periodic audits of the Center-wide KSC AED Program to ensure compliance with this KNPR.

2.3.2 The Medical Director of the KSC occupational medical services contractor, or delegate, shall serve as the AED Program Coordinator (PC) and assist the AED PD with the AED Program implementation.

2.3.3 Each organization that deploys an AED at KSC shall:

- a. Develop an organizational or, in special circumstances, a facility-specific AED program to cover all AEDs deployed by that organization. The AED Program, at a minimum, will adhere to the manufacturer's owner manual procedures and recommendations.
- b. Appoint a point of contact (POC) or designated responsible party for each AED deployed by that organization. One person can serve as the POC or responsible party for multiple AEDs.
- c. Ensure only Food and Drug Administration approved AED units are acquired.
- d. Ensure all deployed AEDs at KSC facilities are registered with the AED PD.
- e. Ensure the AED POC or designated responsible party maintains quality assurance logs (reference section 2.8), purchases new batteries and pads when necessary, completes any needed paperwork in the event of an AED deployment, and communicates any AED discrepancies to the AED PD or the AED PC for each AED unit under their jurisdiction.

## 2.4 Placement of Automated External Defibrillators

2.4.1 To assure maximal use of KSC AED resources, the AED PD and the AED PC, in consultation with the operational personnel in the various areas, shall co-approve placement of all KSC AEDs. The placement of KSC AEDs at KSC will be periodically evaluated.

2.4.2 Factors for AED placement consideration include the:

- a. Number of personnel in an area.
- b. Physical location relative to the Emergency Medical Services responders.
- c. Population relative risk.

## 2.5 Training

An AED may be used by any person at KSC for the purpose of saving the life of another person in a perceived medical emergency. It is encouraged that each AED employed at KSC have at least one individual trained in AED and Cardiopulmonary Resuscitation (CPR). AED and CPR training shall be according to the American Red Cross (ARC), American Heart Association (AHA), or other nationally recognized authority. Such training is available at several medical facilities throughout Brevard County or the local area, as well as the local chapters of the ARC or AHA.

## 2.6 Periodic Drills

2.6.1 The Fitness Center, RehabWorks, and Occupational Health Facility (OHF) shall conduct periodic emergency response drills that include AED use.

2.6.2 Certified Emergency Medical Personnel shall adhere to their state and national requirements for maintaining proficiency in the application of medical devices.

2.6.3 Non-medical personnel shall participate in periodic AED orientation classes as part of the overall KSC Health and Safety educational outreach efforts.

## 2.7 Automated External Defibrillator Installation and Operation

2.7.1 Responsibility for each AED shall be assigned to a designated AED POC.

2.7.2 Each AED POC shall, at a minimum, implement the manufacturer's owner manual procedures for storage, use, inspection, and management for each AED unit under their jurisdiction.

2.7.3 Each AED unit shall be appropriately labeled and contain a Quick Reference Guide Booklet.

2.7.4 Each AED unit shall have a Fast Response Kit which contains non-latex medical gloves, CPR pocket mask, safety razor, disposable towel, and trauma shears. Such kits are commercially available.

2.7.5 Appropriate signage shall indicate the presence of an AED in a facility at each major entrance.

2.7.6 Any non-functional AED shall be tagged out with appropriate signage.

2.7.7 AED wall cabinets shall comply with the following:

- a. When feasible, mount the AED wall cabinet according to the manufacturer's installation manual.
- b. AED wall cabinets are designed to remain unlocked at all times for emergency access. If the AED POC or Facility Manager has a concern over unauthorized access to an AED unit, the AED wall cabinet may be relocated to a more secure location with the approval of the [Sanitation and Public Health Officer](#) or designee. In some circumstances, the AED wall cabinet door may be secured with a breakaway interlocking plastic tie or integrity seal and/or alarmed to alert nearby personnel of possible AED removal. Access to the AED unit or the Fast Response Kit inside the AED case is to remain unfettered and not locked or secured in any manner (e.g., not sealed with a breakaway interlocking plastic tie or similar device).

## 2.8 Quality Assurance Program and Inspections of Automated External Defibrillators

2.8.1 To ensure appropriate quality assurance of AEDs, each AED POC shall develop and maintain logs to document the location of all AEDs under their jurisdiction, including when and how the units are managed.

2.8.2 AED logs shall indicate whether the AED is operational and include such items as expiration dates for batteries and pads.

2.8.3 For employees required to maintain AED and CPR certification for their position, training verification, including place of training and copy of training or certification card, shall be maintained and presented when requested.

## 2.9 Requirements Following Use of Automated External Defibrillators

2.9.1 If an AED is used for a cardiac emergency at KSC, it shall be reported as soon as possible to the AED PD or the AED PC.

a. When pads are applied to a patient and (if required for the AED make and model) the AED is turned on, these together shall constitute "use" of the AED. After an incident, the pads (electrodes) can be removed; however, the battery must not be removed from the unit until the AED can be delivered to the OHF or picked up by designated personnel for analysis.

b. If requested by the AED PD or AED PC, the individual who used the AED shall provide written documentation of the use of the AED. This information may be used to improve the program or to supplement an accident or incident investigation report.

2.9.2 The AED PD and AED PC, or their delegate, shall perform an audit and review of the AED use.

2.9.3 As soon as possible after an event, the AED PD and AED PC, or their delegate, shall contact the AED responder for an AED review. At this time, the AED PD and AED PC, or their delegate, will determine, in concert with the Employee Assistance Program counselor, whether critical incident stress debriefing is warranted for the AED responder and any other personnel involved in the incident.

## CHAPTER 3 BLOODBORNE PATHOGEN PROGRAM

### 3.1 Introduction

In accordance with 29 CFR Part 1910.1030, Occupational Exposure to Bloodborne Pathogens, each employer having an employee or employees with occupational exposure to bloodborne pathogens shall establish a written bloodborne pathogen exposure control plan designed to eliminate or minimize employee exposure. Occupational exposure means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

### 3.2 Exposure Determination

3.2.1 In accordance with 29 CFR 1910.1030(c)(2), Exposure Determination, prior to development of a Bloodborne Pathogen Exposure Control Plan, each employer having an employee or employees with occupational exposure shall prepare an exposure determination.

3.2.2 Examples of job classifications at KSC covered under an exposure control program include:

- a. Medical personnel.
- b. Emergency response crews.
- c. Spill cleanup team members.
- d. Payload engineers and processors.
- e. Stow and de-stow crews.
- f. Lab technicians.
- g. Housekeeping and janitorial personnel with potential for exposure to bloodborne pathogens.
- h. Groundskeepers with potential for exposure to bloodborne pathogens.
- i. Plumbers and domestic wastewater system workers.
- j. Childcare facility workers.

3.2.3 Not all employees in these job classifications have potential for bloodborne pathogen exposure.

3.2.4 The exposure determination shall contain the following:

- a. A list of all job classifications in which all employees in those job classifications have occupational exposure.

b. A list of job classifications in which some employees have occupational exposure and a list of all tasks and procedures, or groups of closely related tasks and procedures, in which occupational exposure occurs and that are performed by employees in these job classifications.

3.2.5 The employer shall coordinate the exposure determination with the Aerospace Medicine and Occupational Health Branch or the KSC occupational health contractor.

3.2.6 After a determination of exposure has been made, the employer shall prepare a written bloodborne pathogen exposure control plan tailored to the task and operations identified in the exposure determination.

### 3.3 Responsibilities

3.3.1 The KSC occupational health contractor shall provide to employers at KSC:

a. Information and training in accordance with 29 CFR Part 1910.1030(g)(2):

- (1) A general explanation of the epidemiology and symptoms of bloodborne diseases.
- (2) An explanation of the modes of transmission of bloodborne pathogens.
- (3) An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
- (4) An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and PPE.
- (5) Information on the types, proper use, location, removal, handling, decontamination, and disposal of PPE.
- (6) An explanation of the basis for selection of PPE.
- (7) Information on the Hepatitis B vaccine, including information on its efficacy, safety, method of administration, and the benefits of being vaccinated as well as the fact that the vaccine and vaccination will be offered free of charge.
- (8) A review of all submitted personnel to determine appropriateness of Hepatitis B vaccination.
- (9) Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.
- (10) An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.
- (11) Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.



(12) Post-exposure prophylaxis follow-up, if needed, for all exposed civil service and contractor personnel.

(13) An explanation of the required signs and labels or color coding (e.g., biohazard bags) associated with bloodborne pathogens.

b. In accordance with 29 CFR Part 1910.1030(f)(2), the Hepatitis B vaccination shall be made available after the employee has received the required training.

c. In accordance with 29 CFR Part 1910.1030(f)(3), Post-Exposure Evaluation and Follow-up, referral to a local medical care provider (usually a hospital emergency room) for any employee potentially exposed to a bloodborne pathogen.

3.3.2 The employer shall provide:

a. Information and training in accordance with 29 CFR Part 1910.1030(g)(2):

(1) An accessible copy of the regulatory text of this standard and an explanation of its contents.

(2) An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan.

(3) Any training specific to the employer's activities as identified in the exposure determination.

b. Post-Exposure Evaluation and Follow-up, in accordance with 29 CFR Part 1910.1030(f)(3), including any expenses associated with referral to a local medical care provider (usually a hospital emergency room) for any employee potentially exposed to a bloodborne pathogen.

c. All other applicable requirements of 29 CFR Part 1910.1030 regarding occupational exposure to bloodborne pathogens.

## **APPENDIX A. Acronyms**

AED	Automated External Defibrillator
AHA	American Heart Association
ARC	American Red Cross
CFR	Code of Federal Regulations
CPR	Cardiopulmonary Resuscitation
KNPR	Kennedy NASA Procedural Requirements
KSC	Kennedy Space Center
NASA	National Aeronautics and Space Administration
NPR	NASA Procedural Requirements
OHF	Occupational Health Facility
PC	Program Coordinator
PD	Program Director
POC	Point-of-Contact
PPE	Personal Protective Equipment
UV	Ultraviolet